

Educational Program of Medical Doctor

*Recent changes made to the program
are discussed at the session of the faculty council:*

Protocol No. 011-23, 06.09.2023

Approved by the decision of the Governing Board:

Resolution No. 26, 14.09.2023

Education level: One-cycle educational program

Instruction language: Georgian

Type of educational program: academic, basic

Detailed field name and code: 0912 Medicine

Awarded qualification: Medical Doctor (MD)

Duration of studying: 6 years (12 semesters)

Educational program volume: 360 ECTS

Head(s) of the educational program:

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Relevance of the program

Medical work is the most important direction of the health care field, which is related to the maintenance and improvement of human health. Safety of patients remains one of the urgent problems of modern medicine, therefore training of highly qualified personnel is our primary task. Patient safety is one of the urgent problems of modern medicine. Accordingly, the use of modern methods of prevention and treatment is relevant today, for which the presence of highly qualified personnel is necessary, since the current market of medical personnel suffers from a shortage of relevant specialists. Modern, rapidly developing high-tech research and treatment facilities and rapidly updating medical knowledge lead to an increase in the number of pathologies detected at the initial stage of the disease and the average life expectancy of the population.

"The relevance of the graduate medical program is increased by the existence of a well-functioning health care system at the state level." The COVID pandemic has created new challenges for the health sector and highlighted weaknesses in effective health management. In many cases, the specialists employed in medical facilities and rehabilitation centers lack modern knowledge and experience, which affects the qualified service and quality of the patient accordingly. The problem can be solved only by raising the quality of teaching at the appropriate level of academic education and implementing educational programs corresponding to the market demand.

Prerequisites for admission to the program

The following will be admitted to the one-cycle educational program of a medical doctor:

A person with a document confirming complete general education or equivalent, who will be entitled to study at a European university based on the ranking of the coefficients of points obtained in the unified national exams.

To enroll in the program, the entrant must pass the following subjects:

- a) Georgian language and literature, English language/Russian language/French language/German language, Biology.
- b) One of the following subjects: Chemistry/Mathematics/Physics. The number of places reserved for subjects should not be less than 30% of the places announced on the program. The exact percentage distribution will be decided by the head of the program before the announcement of seats.

The persons will get the right to study on the program without passing the unified national exams as follows:

On the basis of Order No. 224/N "on the approval of the procedure for submission and review of documents by students/ Entrants/candidates for master's degrees/students with the right to study without passing unified national exams/universal master's degree exams at a higher educational institution" of the Minister of Education and Science of Georgia dated December 29, 2011 ,they have the right to enroll in the university without passing the unified national exams. The mentioned persons are obliged to confirm the B2 level of the Georgian language in accordance with the "Rule for determining the language competence of a European University student".

The following will also be admitted to the program:

Students enrolled by the rule of mobility in accordance of Order No. 10/N dated February 4, 2010 "On approval of the procedure and fees for transferring from a higher educational institution to another higher educational institution" of the Minister of Education and Science of Georgia.

Goals of Program

One-cycle educational program of a medical doctor aims to train a competitive specialist in accordance with modern international standards, who: possesses the theoretical knowledge and practical skills required for professional activity (1); is guided by the principles of evidence-based medicine (2); uses research and communication skills (3); shares ethics norms and principles (4); develops professionally in a constantly changing environment (5).

Learning Outcomes

1. Sectoral knowledge	<ul style="list-style-type: none">• In-depth knowledge of biomedical, behavioral, clinical and social disciplines;• Describes the principles of diagnosis and treatment;• Describes health promotion and disease prevention;• Describes the ethical and legal principles of medical practice;• Analyzes the role of the doctor in the healthcare system.
2. Consultation for the patient	<ul style="list-style-type: none">• Collects anamnesis;• Conducts a physical examination;• Evaluates the patient's psycho-emotional status;• Makes valid clinical decisions;• Gives advice and explanations to patients, supports them.
3. Clinical case evaluation, examination appointment, differential diagnosis, disease management plan discussion	<ul style="list-style-type: none">• Evaluates the complexity of the clinical manifestation of the disease, identifies them;• Appoints appropriate tests, interprets the results;• Carries out differential diagnosis;• Discusses the disease management plan with patients and their caregivers;• Establishes a management plan for the patient's condition, in collaboration with the patient and his environment;• Takes care of terminally ill patients and their surroundings;• Manages chronic diseases.

<p>4. Providing assistance during an emergency medical situation (first aid and resuscitation measures)</p>	<ul style="list-style-type: none"> • Recognizes and assesses emergency medical conditions; • Provides basic first aid, taking into account age characteristics (children, elderly); • Implements basic life-sustaining measures in accordance with current guidelines; • Conducts extended life-sustaining measures in accordance with current guidelines; • Treats injuries according to current guidelines.
<p>5. Prescribing medicines</p>	<ul style="list-style-type: none"> • Prescribes medications clearly and correctly, taking into account the patient's age; • Selects drugs according to the clinical context; • Evaluates the appropriateness of medications and other treatments based on potential benefits and risks; • Manages pain and distress; • Analyzes drug compatibility and interactions when prescribing treatment.
<p>6. Carrying out practical procedures</p>	<ul style="list-style-type: none"> • Evaluates vital signs: pulse, breathing, temperature; • Measures pressure; • Measures saturation; • Washes his/her hands correctly; wears gloves correctly; • Performs venipuncture of the peripheral vein (using a simulator); • Performs peripheral vein catheterization (using a simulator); • Administers medication into a vein through an infusion device (using a simulator) • Injects under the skin and/or into the muscle (using a simulator or on the patient, under supervision); • Supplies oxygen; • Describes patient transportation and handling techniques;

	<ul style="list-style-type: none"> • Makes stitches (using a simulator); • Treats the wound and applies a bandage; • Performs bladder catheterization (using a simulator); • Describes the technique of taking urine analysis; • Makes an electrocardiogram; • Interprets the electrocardiogram; • Conducts functional tests of the respiratory system; • Uses inhalation drugs correctly.
<p>7. Effective communication in a medical context</p>	<ul style="list-style-type: none"> • Effectively establishes communication with the patient; • Effectively establishes communication with colleagues; • Communicates effectively when informing bad news; • Effectively establishes communication with the patient's surroundings; • Communicates effectively with persons with disabilities; • Communicates effectively in order to obtain informed consent; • Conducts written communication (including medical record keeping); • Copes with aggressive and conflict situations through appropriate communication; • Communicates effectively with patients through a support person; • Establishes proper communication with law enforcement bodies and mass media as it's required; • Establishes communication with any person, regardless of his/her social, cultural, religious and ethnic affiliation.
<p>8. Application of ethical and legal principles in medical practice</p>	<ul style="list-style-type: none"> • Protects privacy; • Uses ethical principles and analytical skills within the treatment; • Obtains informed consent if necessary and makes a corresponding record; • Issues a Death Certificate;

	<ul style="list-style-type: none"> • In the cases provided for by the legislation of Georgia, requests an autopsy; • Applies the applicable norms of Georgian and international legislation within the treatment; • Effectively conducts medical activities in a multicultural society.
9. Assessment of psychological and social aspects related to the patient's illness	<ul style="list-style-type: none"> • Evaluates the psychological factors of the manifestation of the disease and its impact on the patient; • Evaluates the social factors of the manifestation of the disease and its impact on the patient; • Determines stress related to the disease; • Determines drug and alcohol addiction.
10. Application of principles, skills and knowledge of evidence-based medicine	<ul style="list-style-type: none"> • Uses evidence in medical activities; • Defines and conducts literary research correctly; • Critically evaluates the published literature. Draws conclusions correctly and uses them in practical activities.
11. Use of the latest information and information technologies in the medical context	<ul style="list-style-type: none"> • Properly produces clinical records and keeps them in complete form; • Uses information technologies within the scope of medical practice; • Searches for specific information resources; • Stores information and uses it properly; • Maintains and uses personal records appropriately.
12. Application of principles, methods and knowledge of scientific activity in medical practice and research	<ul style="list-style-type: none"> • Appropriately uses the methodology of scientific research production; • Develops a research design, plans in detail, processes the obtained results and draws conclusions; • Uses the achievements of biomedical sciences in practical activities; • Writes reviews/reports at the academic level based on a critical analysis of the existing scientific literature in the biomedical field; • Uses ethical principles of scientific research.

<p>13. Implementation of health promotion measures, involvement in public health issues, effective work in the health care system</p>	<ul style="list-style-type: none"> • Chooses treatment with minimal risk of harm to the patient; • Takes appropriate measures to prevent the spread of infection; • Adequately evaluates own health problems in relation to professional duties; • Analyzes the importance of engagement in health promotion activities at the individual and population level.
<p>14. Professionalism</p>	<p>General characteristics of professionalism as follows:</p> <p>Keeps the principles of impartiality, integrity and ethics;</p> <ul style="list-style-type: none"> • Carries out medical activities with appropriate quality; • Expresses a critical and self-critical attitude, accepts criticism; • Expresses empathy (sympathy); • Shows creativity; • Shows initiative, expresses desire for success; • Demonstrates the ability to constantly update knowledge; • Demonstrates interpersonal skills; • Demonstrates ability to work in a group. <p>Professionalism in activity:</p> <ul style="list-style-type: none"> • Analyzes the limits of one's abilities, asks for help (as it is required); • Demonstrates leadership skills; • acts independently as it is required; • Solves problems; • Makes decisions; • Works in a multidisciplinary team; • Establishes communication with experts of other disciplines; • Adapts to new situations; • Plans and manages organizational processes, effectively manages time. <p>Doctor as an expert:</p>

	<ul style="list-style-type: none"> • Analyzes and draws a conclusion; • Demonstrates learning and teaching skills; • Demonstrates knowledge in practical activities; • Demonstrates scientific-research skills; <p>A doctor in a global context:</p> <ul style="list-style-type: none"> • Has the ability to work in a multicultural society and understand their diversity; • Demonstrates respect for the culture of other countries and its related features; • Works with international context in mind; • Owns a second language; • Has general knowledge beyond the medical field.
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Volume and Structure of the Program

The program is made on the basis of the European Credit Transfer System (ECTS), is student-centered, and is based on the student's academic load required to achieve the goals of the educational program.

The duration of the program is 6 academic years or 12 semesters and includes 360 credits (10800 hours in total).

1 credit includes 30 astronomical hours.

A credit in a unit of time (hours) reflects the volume of work required by the student to master the relevant study course of the program and to achieve the learning outcomes. Credit includes contact and independent work hours.

During the semester, the student must complete 30 credits (30 credits = 900 hours), and 60 credits per year, however, the student's annual study load can be determined by more than 60 credits. Within the established duration of the program, the total number of credits added above 60 does not exceed 15 credits in total.

One-cycle educational program of a medical doctor is partially integrated. A key feature of an integrated program is the vertical and/or horizontal integration of basic and clinical subjects.

Vertical integration refers to combining basic and clinical subjects into one curriculum by system and/or syndrome. In horizontal integration, unification refers to contiguous subjects in the basic or

clinical aspect, when unification occurs mainly around the system. The mentioned approach helps not only to give the student static knowledge, but also to form flexible clinical thinking. The integrated and semi-integrated program creates a curriculum that helps students develop critical thinking and self-development.

In an integrated program, different sources of information from different domains are intersected in favor of a unified concept. This, in turn, helps the student to integrate knowledge and skills from different sources in the context of a real clinical situation.

In the process of developing one-cycle educational program for a medical doctor, within the framework of partial integration, contiguous basic training courses were combined around the systems of the human body. In the same training courses, the parts of presentation and analysis of clinical cases were included, which serves to bring the student closer to real clinical practice at the very beginning of the education process. The clinical training courses were combined around the main directions, which ensures the systematic thinking of the student in the clinical aspect.

One-cycle educational program of a medical doctor includes the main study area and free components, namely:

Components of the main field of study with the volume of 334 credits. Including:

- a) Mandatory components of the main study area with the volume of 324 credits (including the research component with the volume of 10 credits, and 20 credits for teaching in the clinical skills center/laboratory);
- b) Optional training courses of the main field of study with the volume of 10 credits;

The educational program also includes a free component with the volume of 26 credits, including:

- a) Compulsory free component with the volume of 16 credits, which is focused on the development of general transferable skills;
- b) By choosing a free component with the volume of 10 credits, which is focused on the development of general transferable skills / a free component with the volume of 10 credits, within the framework of which the student is given the opportunity to choose study courses from any educational program of the relevant level operating in the university, observing the prerequisites for admission to the study course.

The program of Medical Doctor is divided into 4 phases:

Phase I - structure and functions of the human body (I-II course)

The Fundamentals of Medicine phase includes horizontal integrated modules: Human Body I, II, III, IV - which cover anatomy, physiology and radiology of the musculoskeletal, cardiovascular, respiratory, digestive, endocrine and genitourinary (urogenital) systems and provide the student with

knowledge of the structure of these systems , about functioning and radiological picture. Gene, Cell, and Tissue I, II, III, IV—Integrates the life sciences: biochemistry, cell biology, histology/embryology, biophysics, immunology, and microbiology. Clinical and professional skills I, II, III, IV - within the modules, from the first semester of the program, clinical practice is provided, by introducing communication with the patient and studying practical skills. Within the integrated modules Medicine and Society I, II and Scientific Reasoning I, II the student is introduced to the basics of public health and scientific research skills in the very first phase. The teaching of the mentioned training courses will be carried out using various teaching-learning methods and activities (lectures, PBL, role-playing games, practical work, work in the simulation laboratory, etc.). Students will learn regional anatomy through virtual dissection and the use of mannequins.

Phase II - Mechanisms of Health and Disease (III Course)

At the stage of pre-clinical education, the main attention is paid to the discussion of aspects related to human morbidity, such as pathology, mechanisms of disease development and treatment. In addition, students learn diagnostic thinking in various medical fields by reviewing cases and perfecting physical examination skills within the integrated modules: Fundamentals of Disease and Treatment I, II (Basics of Pathology, Basics of Pharmacology). Introduction to clinical diagnosis I, II - physical diagnosis, clinical skills. In the same phase, the student learns neuroanatomy, neurophysiology and behavioral science in the integrated module Brain, Mind and Behavior. The acquired knowledge prepares students to fully grasp the clinical subjects that begin in the next year in the program. Within the longitudinal module of clinical and professional skills, students engage in the process of solving clinical problems, which in turn is carried out through various clinical scenarios (Clinical Thinking Course). In this method, the main emphasis is placed on in-depth analysis and synthesis of information by students, as well as on its practical application in a clinical context.

Phase III - the main clinical phase (IV-V course)

During the IV and V courses, students study basic clinical subjects in the form of clinical rotations - internal medicine (based on the system), Surgery, Obstetrics and Gynecology, Emergency Medicine, Pediatrics, Psychiatry, Radiology, Otorhinolaryngology, etc. In parallel, students continue to learn clinical and professional skills that include perfecting professional behavior in a simulation center and clinical environment. The mentioned training courses are taught both in ambulatory and clinical environments.

IV phase - the final stage of the clinical phase (VI course)

During the VI, graduate course, students develop and complete competencies in Internal Medicine, Surgery, Obstetrics and Gynecology, infectious diseases, Family Medicine, Geriatrics, Pediatrics, and Emergency Medicine. In accordance with spiral curriculum requirements and principles of integration, core subjects (eg, Pharmacology and Medical Genetics) are reviewed within graduate course modules.

Within the framework of the same course, a small group of students is given various outpatient and hospital clinical assignments, the completion of which prepares the graduate students for future specialization and postgraduate residency programs.

Assessment System of Student's Knowledge

The evaluation system used within the program is in accordance with the "Rules for calculating credits for higher education programs" approved by Order No. 3 of the Minister of Education and Science of Georgia on January 5, 2007.

The level of achievement of the learning outcome is assessed by assessment forms, mid-term assessment and final assessment, the sum of which represents the final assessment. The maximum final grade of the training course is 100 points.

The evaluation system provides for:

a) Five types of positive assessment:

(A) Excellent - 91-100 points;

(B) Very good – 81-90 points;

(C) Good – 71-80 points;

(D) Satisfactory – 61-70 points;

(E) Sufficient – 51-60 points.

b) two types of negative assessment:

(FX) Failed – 41-50 points, which means that the student needs more work to pass and is allowed to take the additional exam once with independent work;

(F) Failed – 40 points and less, which means that the work done by the student is not enough and he has to study the course/subject again.

In case of receiving a negative evaluation (FX) in the component of the educational program, the student has the right to take an additional exam. The student obtains the right to take the additional exam even if he/she has scored 51 points or more in the final assessment, but has not passed the minimum competence limit defined for the final exam. An additional exam is scheduled at least 5 days after the announcement of the final exam results.

The number of points obtained in the final assessment is not added to the grade received by the student in the additional exam. The grade obtained on the additional exam is the final grade and is reflected in the final grade of the educational program component.

The share of the final exam in the final assessment is 40% (40 points), therefore, the share of the mid-term assessment is 60% (60 points) of the final assessment.

The midterm assessment is divided into components. A mandatory component of the mid-term assessment is the mid-term exam, which is held in the 8th-9th week (the period of the mid-term exam during curative teaching is specified in the syllabus of the relevant training course). The content and distribution of the mid-term assessment components is determined by the staff implementing the training course within the framework of the relevant syllabus.

A student will be admitted to the final exam if the minimum limit of the mid-term assessment is exceeded. The final exam will be considered passed if the minimum limit for the final exam is exceeded.

The following minimum competency limits are defined for the mid-term assessment and the final exam: 50% of the mid-term assessment (to be admitted to the final exam, the student's mid-term assessment must be at least 30 points), 50%+1 of the final exam assessment (for the final exam to be considered passed, the final exam assessment must be at least 21 points).

The credit will be considered as mastered whether the sum of the points obtained based on the minimum limit established for the mid-term assessment and the minimum limit established in the final exam is obtained by summing up 51 points or more.

The staff implementing the study course, taking into account the specifics of the course, is authorized to define different (higher) minimum competency limits for midterm and final assessments, in accordance with the requirements established by the current legislation of Georgia.

In the case of integrated study courses, the staff implementing the course is authorized to determine the minimum competence limit for each component of the same course. In this case, it will be possible to grant credit in the case of passing the minimum competence threshold established for each component, passing the minimum competence threshold in the evaluation components of the course (midterm and final assessment) and receiving at least 51 points as a result of summing up the points obtained in the midterm and final assessments.

The staff implementing the course, taking into account the goals, learning outcomes and specifics of the course, is also authorized to determine the minimum competence level in the evaluation method/methods. If there is a minimum competency limit in the assessment method/methods, credit will be granted by passing the minimum competency limit in each assessment method, passing the minimum competency limit in each assessment component (mid-term and final assessment) and obtaining at least 51 points as a result of summing the points obtained in the mid-term and final assessments in case.

According to the current legislation of Georgia, a graduate of one-cycle educational program of a medical doctor has the right to carry out independent medical activity in case of obtaining a state certificate confirming the right to independent medical activity (Law of Georgia on medical activity, Article 7).

According to the Law on Medical Activities (Article 17), a graduate with a higher medical education has the right to carry out the following activities:

- a) to pass the post-secondary professional training course and after taking the state certification exam, get the right to independent medical activity;
- b) to carry out research and teaching activities in the theoretical fields of medicine or in other areas of health care, which do not involve independent medical activity;
- c) to work as a junior doctor.